

Patent Abstracts of Japan

PUBLICATION NUMBER : 11176750
PUBLICATION DATE : 02-07-99

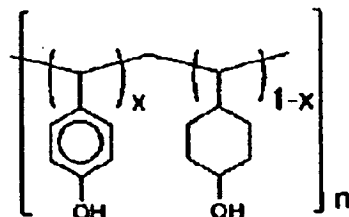
APPLICATION DATE : 17-09-98
APPLICATION NUMBER : 10262200

APPLICANT : INTERNATL BUSINESS MACH CORP
<IBM>;

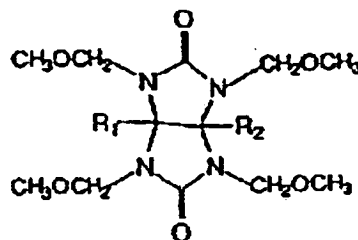
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INT.CL. : H01L 21/027 G03F 7/038 G03F 7/038

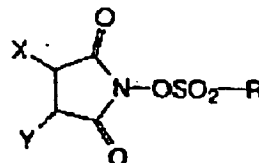
TITLE : PHOTORESIST COMPOSITION WHICH
CAN BE DEVELOPED BY WATER
BASE AND PATTERN FORMATION BY
USING THE SAME



I



II



III

ABSTRACT : PROBLEM TO BE SOLVED: To obtain high resolution which enables development by water base, by adding film formation polymer resin with phenol group by a specified formula, glycol uril derivative cross linking agent, radiolysis acid generation agent and organic base.

SOLUTION: A photoresist composition comprises film formation polymer resin with phenol group. The phenol resin is copolymer of hydroxystyrene and hydroxycyclohexyl ethene shown by a formula I ($n > 1$, $0 < X < 1$ in the formula). It comprises glycol uril derivation cross linking agent of a formula II (R, R express a 1-6 C alkyl, alkenyl, etc., in the formula) which forms cross linking reacting on phenol group by acid catalyst. It further comprises photodissociating acid generation agent by a formula III which forms acid catalyst which is necessary for cross linking formation on exposure by ultraviolet radiation, and organic base such as tertiary amine which increases storage stability of formula and adjusts photo reaction velocity.

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